



PCT

## RAW SEQUENCE LISTING

DATE: 09/06/2005

PATENT APPLICATION: US/10/525,573

TIME: 12:48:18

Input Set : N:\Crif3\RULE60\10525573.raw

Output Set: N:\CRF4\09062005\J525573.raw

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1 <110> APPLICANT: Lorens, James B.
2   Bogenberger, Jakob
3   Holland, Sacha
4   Xu, Weiduan
5   Rigel Pharmaceuticals, Inc.
6 <120> TITLE OF INVENTION: Modulators of Angiogenesis
7 <130> FILE REFERENCE: 021044-004110PC
8 <140> CURRENT APPLICATION NUMBER: US/10/525,573
9 <141> CURRENT FILING DATE: 2005-02-23
10 <150> PRIOR APPLICATION NUMBER: PCT/US03/27523
11 <151> PRIOR FILING DATE: 2003-09-02
12 <150> PRIOR APPLICATION NUMBER: US 10/231,956
13 <151> PRIOR FILING DATE: 2002-08-30
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36   nngccgcact tcgagtctag cggatttata tatagacacg ccgcaactag ngagcgtccc      660
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68	tcataagta	tgtgtggagc	gcctcggggc	tgctcatggt	ggctgtcccc	atcatcactg	1440
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92	ccacagtgc	tgggcccctg	ccagggcagt	gagtcctcta	ctttgtccg	tggaggaagc	2880
93	tggggtacaa	ggggcccagt	gctggccaca	cagcagcgca	gccgagcccc	aggagcccg	2940
94	caggccacag	cccctggcac	tgagggtggc	ctccctccag	agactcgagt	ccccatgatt	3000

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174 &lt;210&gt; SEQ ID NO: 4

175 &lt;211&gt; LENGTH: 745

176 &lt;212&gt; TYPE: PRT

177 &lt;213&gt; ORGANISM: Homo sapiens

178 &lt;400&gt; SEQUENCE: 4

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184               35             40             45
185   Pro Ala Gly Glu Pro Thr Gln Glu Ala Ser Gly Val Ala Ala Ala Lys
186       50             55             60
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189   Leu Leu Phe Pro Arg Val Leu Cys Arg Glu Thr Gly Leu Leu Ala Leu
190               85             90             95
191   His Ser Ala Ala Leu Val Ser Arg Thr Phe Leu Ser Val Tyr Val Ala
192               100            105            110
193   Arg Leu Asp Gly Arg Leu Ala Arg Cys Ile Val Arg Lys Asp Pro Arg
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199   Ser Phe Arg Ser Arg Leu Val Ala His Ala Tyr Arg Leu Tyr Phe Ser
200                      165                      170                      175
201   Gln Gln Thr Tyr Tyr Arg Val Ser Asn Met Asp Gly Arg Leu Arg Asn
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203   Pro Asp Gln Ser Leu Thr Glu Asp Val Val Ala Phe Ala Ala Ser Val
204       195                      200                      205
205   Ala His Leu Tyr Ser Asn Leu Thr Lys Pro Leu Leu Asp Val Ala Val
206       210                      215                      220
207   Thr Ser Tyr Thr Leu Leu Arg Ala Ala Arg Ser Arg Gly Ala Gly Thr
208   225                      230                      235                      240
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210                      245                      250                      255
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213   Ala Arg Arg Lys Gly Glu Leu Arg Tyr Met His Ser Arg Val Val Ala
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215   Asn Ser Glu Glu Ile Ala Phe Tyr Gly Gly His Glu Val Glu Leu Ala
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218   305                      310                      315                      320
219   Leu Leu Glu Arg Leu Trp Tyr Val Met Leu Glu Gln Phe Leu Met Lys
220                      325                      330                      335
221   Tyr Val Trp Ser Ala Ser Gly Leu Leu Met Val Ala Val Pro Ile Ile
222       340                      345                      350
223   Thr Ala Thr Gly Tyr Ser Glu Ser Asp Ala Glu Ala Val Lys Lys Ala
224       355                      360                      365
225   Ala Leu Glu Lys Lys Glu Glu Leu Val Ser Glu Arg Thr Glu Ala
226       370                      375                      380
227   Phe Thr Ile Ala Arg Asn Leu Leu Thr Ala Ala Ala Asp Ala Ile Glu
228   385                      390                      395                      400
229   Arg Ile Met Ser Ser Tyr Lys Glu Val Thr Glu Leu Ala Gly Tyr Thr
230                      405                      410                      415
231   Ala Arg Val His Glu Met Phe Gln Val Phe Glu Asp Val Gln Arg Cys
232       420                      425                      430
233   His Phe Lys Arg Pro Arg Glu Leu Glu Asp Ala Gln Ala Gly Ser Gly
234       435                      440                      445
235   Thr Ile Gly Arg Ser Gly Val Arg Val Glu Gly Pro Leu Lys Ile Arg
236       450                      455                      460
237   Gly Gln Val Val Asp Val Glu Gln Gly Ile Ile Cys Glu Asn Ile Pro
238   465                      470                      475                      480
239   Ile Val Thr Pro Ser Gly Glu Val Val Val Ala Ser Leu Asn Ile Arg
240                      485                      490                      495
241   Val Glu Glu Gly Met His Leu Leu Ile Thr Gly Pro Asn Gly Cys Gly
242       500                      505                      510
243   Lys Ser Ser Leu Phe Arg Ile Leu Gly Gly Leu Trp Pro Thr Tyr Gly

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**RAW SEQUENCE LISTING ERROR SUMMARY**  
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**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:9; N Pos. 22,729,733,779,784,787  
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Seq#:47; N Pos. 326,502,542,559,568,575,598,607,634,636,662,668,704,732,733  
Seq#:47; N Pos. 740,773  
Seq#:48; N Pos. 189,255,298,337  
Seq#:49; N Pos. 144,146,163,174,187,231,255  
Seq#:50; N Pos. 112,248  
Seq#:51; N Pos. 135  
Seq#:54; N Pos. 472,565,602  
Seq#:55; N Pos. 403  
Seq#:61; N Pos. 75,102  
Seq#:65; N Pos. 12,31,80,84,119,128,169,175,216,231,320,327,332,347,362,414  
Seq#:66; N Pos. 44,118  
Seq#:72; N Pos. 6,198  
Seq#:75; N Pos. 14,77,80  
Seq#:80; N Pos. 22,42  
Seq#:84; N Pos. 189  
Seq#:85; N Pos. 89,108  
Seq#:88; N Pos. 77  
Seq#:91; N Pos. 226,303,375,425,437,455,474,551,557,574,612,707  
Seq#:93; N Pos. 5,35,182,335,398,399,403,433,448,491  
Seq#:94; N Pos. 524,526,657,666  
Seq#:98; N Pos. 416

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 09/06/2005  
PATENT APPLICATION:    US/10/525,573      TIME: 12:48:19

Input Set : N:\Crf3\RULE60\10525573.raw  
Output Set: N:\CRF4\09062005\J525573.raw

Seq#:99; N Pos. 66,178,423,545  
Seq#:100; N Pos. 345,430  
Seq#:101; N Pos. 262,410,471,478,518,537,542,558,576,579,611,615,638  
Seq#:104; N Pos. 205,354  
Seq#:105; N Pos. 281,357,385,398  
Seq#:106; N Pos. 445  
Seq#:107; N Pos. 548

**Invalid Line Length:**

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 26,27,28,29,30,31,32,33,34,35,36,37,38  
Seq#:2; Line(s) 45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64  
Seq#:2; Line(s) 65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84  
Seq#:2; Line(s) 85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102  
Seq#:2; Line(s) 103,104,105  
Seq#:3; Line(s) 112,113,114,115,116,117,118,119,120,121,122,123,124,125,126  
Seq#:3; Line(s) 127,128,129,130,131,132,133,134,135,136,137,138,139,140,141  
Seq#:3; Line(s) 142,143,144,145,146,147,148,149,150,151,152,153,154,155,156  
Seq#:3; Line(s) 157,158,159,160,161,162,163,164,165,166,167,168,169,170,171  
Seq#:3; Line(s) 172  
Seq#:5; Line(s) 283,284,285,286,287,288,289  
Seq#:6; Line(s) 300,301,302,303,304,305,306,307  
Seq#:7; Line(s) 314,315,316,317,318  
Seq#:8; Line(s) 325,326,327,328,329,330,331  
Seq#:9; Line(s) 342,343,344,345,346,347,348,349,350,351,352,353,354,355,356  
Seq#:10; Line(s) 367,368,369,370,371,372,373,374,375,376,377,378  
Seq#:11; Line(s) 389,390,391,392,393,394,395,396,397,398,399  
Seq#:12; Line(s) 410,411,412,413,414,415,416,417,418,419  
Seq#:13; Line(s) 430,431,432,433,434,435,436,437,438  
Seq#:14; Line(s) 445,446,447,448,449,450,451,452  
Seq#:15; Line(s) 459,460,461,462,463,464,465,466,467,468,469  
Seq#:16; Line(s) 476,477,478,479,480,481,482,483,484,485,486  
Seq#:17; Line(s) 493,494,495,496,497,498,499  
Seq#:18; Line(s) 506,507,508,509,510,511,512,513,514,515  
Seq#:19; Line(s) 522,523,524,525,526,527,528,529,530,531,532  
Seq#:20; Line(s) 543,544,545,546,547,548,549  
Seq#:21; Line(s) 556,557,558,559,560,561  
Seq#:22; Line(s) 572,573,574,575,576  
Seq#:23; Line(s) 587,588,589,590,591,592,593,594,595,596,597  
Seq#:24; Line(s) 608,609,610,611,612,613,614,615,616,617,618,619,620,621  
Seq#:24; Line(s) 622  
Seq#:25; Line(s) 633,634,635,636,637,638  
Seq#:26; Line(s) 649,650,651,652,653,654,655,656,657,658,659,660,661  
Seq#:27; Line(s) 672,673,674,675,676,677,678,679,680,681  
Seq#:28; Line(s) 688,689,690,691,692,693,694,695,696,697  
Seq#:29; Line(s) 708,709,710,711,712,713,714,715,716,717,718,719,720,721  
Seq#:30; Line(s) 732,733,734,735,736,737,738,739,740,741,742,743,744,745

**RAW SEQUENCE LISTING ERROR SUMMARY**      DATE: 09/06/2005  
PATENT APPLICATION: **US/10/525,573**      TIME: 12:48:19

Input Set : **N:\Crif3\RULE60\10525573.raw**  
Output Set: **N:\CRF4\09062005\J525573.raw**

Seq#:31; Line(s) 752,753,754,755,756,757,758  
Seq#:32; Line(s) 765,766,767,768,769,770,771,772,773,774,775,776,777,778  
Seq#:32; Line(s) 779,780,781,782,783,784,785,786,787,788,789,790,791,792  
Seq#:34; Line(s) 851,852,853,854,855,856,857,858,859  
Seq#:35; Line(s) 866,867,868,869,870,871,872,873,874,875  
Seq#:36; Line(s) 882,883,884,885,886,887,888,889,890,891  
Seq#:37; Line(s) 898,899,900,901,902,903,904,905,906,907,908,909,910  
Seq#:38; Line(s) 917,918,919,920,921,922,923,924,925,926,927,928  
Seq#:39; Line(s) 935,936,937,938,939,940,941,942,943,944,945  
Seq#:40; Line(s) 952,953,954,955,956,957,958,959,960,961,962,963  
Seq#:41; Line(s) 970,971,972,973,974,975,976,977,978,979,980,981,982  
Seq#:42; Line(s) 993,994,995,996,997,998,999,1000,1001,1002,1003,1004  
Seq#:43; Line(s) 1011,1012,1013,1014,1015,1016,1017,1018,1019,1020,1021  
Seq#:43; Line(s) 1022,1023,1024,1025,1026,1027,1028,1029,1030,1031,1032



## VERIFICATION SUMMARY

DATE: 09/06/2005

PATENT APPLICATION: US/10/525,573

TIME: 12:48:19

Input Set : N:\Crf3\RULE60\10525573.raw

Output Set: N:\CRF4\09062005\J525573.raw

L:28 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:120  
M:341 Repeated in SeqNo=1  
L:286 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:180  
M:341 Repeated in SeqNo=5  
L:304 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:240  
M:341 Repeated in SeqNo=6  
L:342 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
M:341 Repeated in SeqNo=9  
L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0  
M:341 Repeated in SeqNo=10  
L:394 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:300  
M:341 Repeated in SeqNo=11  
L:414 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:240  
M:341 Repeated in SeqNo=12  
L:431 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:60  
M:341 Repeated in SeqNo=13  
L:543 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0  
M:341 Repeated in SeqNo=20  
L:572 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0  
L:594 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:420  
M:341 Repeated in SeqNo=23  
L:617 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:540  
M:341 Repeated in SeqNo=24  
L:634 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:60  
M:341 Repeated in SeqNo=25  
L:660 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:660  
L:679 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:420  
L:716 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:480  
M:341 Repeated in SeqNo=29  
L:736 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:240  
M:341 Repeated in SeqNo=30  
L:1004 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:660  
L:1145 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:120  
M:341 Repeated in SeqNo=45  
L:1169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:120  
M:341 Repeated in SeqNo=46  
L:1195 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:300  
M:341 Repeated in SeqNo=47  
L:1216 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:180  
M:341 Repeated in SeqNo=48  
L:1232 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:120  
M:341 Repeated in SeqNo=49  
L:1247 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:60  
M:341 Repeated in SeqNo=50  
L:1263 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:120  
L:1312 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:420  
M:341 Repeated in SeqNo=54  
L:1332 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:360

**VERIFICATION SUMMARY**

DATE: 09/06/2005

PATENT APPLICATION: US/10/525,573

TIME: 12:48:19

Input Set : N:\Crf3\RULE60\10525573.raw

Output Set: N:\CRF4\09062005\J525573.raw

L:1541 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61 after pos.:60

L:1664 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:65 after pos.:0